

WHAT IS CLAIMED IS:

1. A magnetic tape recording apparatus for recording digital data on a magnetic tape by using a rotary head, comprising:

first acquisition means for acquiring a first group of data including video data, audio data, or search data;

second acquisition means for acquiring a second group of data including subcode data related to said first group of data;

synthesizing means for synthesizing data by combining said first group of data and said second group of data so that both groups of data are continuous on the tracks of said magnetic tape without being separated; and

supply means for supplying the synthesized data to said rotary head so that the synthesized data is recorded on said magnetic tape.

2. A magnetic tape recording apparatus according to Claim 1, wherein:

said first acquisition means acquires high definition video data as said video data;

said first acquisition means further comprises compression means for compressing the high definition video data acquired by said first acquisition means; and

said synthesizing means performs combination processing on the high definition video data compressed by said compression means.

3. A magnetic tape recording apparatus according to Claim 2, wherein said compression means compresses the high definition video data by using MP@HL or MP@H-14 in the MPEG system.

4. A magnetic tape recording apparatus according to Claim 2, further comprising third acquisition means for acquiring compressed standard definition video data,

wherein:

the high definition video data acquired by said first acquisition means includes identification information for identifying the high definition video data as the standard definition video data; and

said synthesizing means select either the high definition video data compressed by said compression means or the standard definition video data acquired by said acquisition means so that combination processing on the selected video data is performed.

5. A magnetic tape recording method for recording digital data on a magnetic tape by using a rotary head,

comprising:

a first acquisition step for acquiring a first group of data including video data, audio data, or search data;

a second acquisition step for acquiring a second group of data including subcode data related to said first group of data;

a synthesizing step for synthesizing data by combining said first group of data and said second group of data so that both groups of data are continuous on the tracks of said magnetic tape without being separated; and

a supply step for supplying the synthesized data to said rotary head so that the synthesized data is recorded on said magnetic tape.

6. A computer-readable recording medium containing a program for controlling a magnetic tape recording apparatus which records digital data on a magnetic tape by using a rotary head, said program comprising:

a first acquisition step for acquiring a first group of data including video data, audio data, or search data;

a second acquisition step for acquiring a second group of data including subcode data related to said first group of data;

a synthesizing step for synthesizing data by combining said first group of data and said second group of data so

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that both groups of data are continuous on the tracks of said magnetic tape without being separated; and

a supply step for supplying the synthesized data to said rotary head so that the synthesized data is recorded on said magnetic tape.

7. A format for use in a magnetic tape having digital data recorded by a rotary head, wherein a first group of data including video data, audio data, or search data, and a second group of data including subcode data related to said first group of data are continuously recorded on the tracks of said magnetic tape without being separated.

8. A magnetic tape reading apparatus comprising:

a rotary head for reading a magnetic tape on which a first group of data including compressed high definition or standard definition video data, audio data, and search data, and a second group of data including subcode data related to said first group of data are continuously recorded on the tracks of said magnetic tape without being separated;

first decompression means for, among the data read from said magnetic tape by said rotary head, decompressing the compressed high definition video data;

second decompression means for, among the data read from said magnetic tape by said rotary head, decompressing

the compressed standard definition video data;

detection means for, from the data read from said magnetic tape by said rotary head, detecting identification information for identifying either the high definition video data or the standard definition video data; and

selection means for selectively controlling, based on the result of detection by said detection means, one of said first decompression means and said second decompression means to process the data read from said magnetic tape by said rotary head.

9. A magnetic tape reading apparatus according to Claim 8, wherein:

said first decompression means decompresses the high definition video data by using MP@HL or MP@H-14 in the MPEG system; and

said second decompression means decompresses the standard definition video data by using the digital visual format.

10. A magnetic tape reading method for a magnetic tape reading apparatus for reading, by a rotary head, a magnetic tape on which a first group of data including compressed high definition or standard definition video data, audio data, and search data, and a second group of data including

subcode data related to said first group of data are continuously recorded on the tracks of said magnetic tape without being separated, said magnetic tape reading method comprising:

a first decompression step for, among the data read from said magnetic tape by said rotary head, decompressing the compressed high definition video data;

a second decompression step for, among the data read from said magnetic tape by said rotary head, decompressing the compressed standard definition video data;

a detection step for, from the data read from said magnetic tape by said rotary head, detecting identification information for identifying either the high definition video data or the standard definition video data; and

a selection step for selectively controlling, based on the result of detection by said detection step, one of said first decompression step and said second decompression step to process the data read from said magnetic tape by said rotary head.

11. A computer-readable recording medium containing a program for controlling a magnetic tape reading apparatus which uses a rotary head to read a magnetic tape on which a first group of data including compressed high definition or standard definition video data, audio data, and search data,

and a second group of data including subcode data related to said first group of data are continuously recorded on the tracks of said magnetic tape without being separated, said program comprising:

a first decompression step for, among the data read from said magnetic tape by said rotary head, decompressing the compressed high definition video data;

a second decompression step for, among the data read from said magnetic tape by said rotary head, decompressing the compressed standard definition video data;

a detection step for, from the data read from said magnetic tape by said rotary head, detecting identification information for identifying either the high definition video data or the standard definition video data; and

a selection step for selectively controlling, based on the result of detection by said detection step, one of said first decompression step and said second decompression step to process the data read from said magnetic tape by said rotary head.